EFFECT OF WEATHER ON CROPS AND FARMING OPERATIONS, SEPTEMBER, 1927

By J. B. KINCER

General summary.—Generally warm, dry, and sunshiny weather prevailed in nearly all sections east of the Rocky Mountains during the first three weeks of the month, making conditions unusually favorable for maturing late crops and enabling farm work to make rapid advance. It was especially favorable in forcing the late corn crop to maturity and all growing crops were greatly benefited. Showers were helpful in some north-central and southwestern districts, but many areas were still in need of moisture, especially in southwestern Nebraska and western Kansas. Rain was needed also in the South for late crops, but the drought was relieved in the Pacific Northwest and beneficial precipitation occurred in the far Southwest.

There was a continuation of warm weather until near the close of the second decade, when an abrupt change to cooler halted progress of late fall crops. Rains in the west Gulf area were beneficial and showers were helpful in areas from the upper Mississippi Valley eastward, but there was a rather widespread need of moisture in many places. At the close of the month the cool waves brought killing frosts over much of the Northwest, at about the average first frost date, and lighter frosts to scattered localities, principally on lowlands of the interior valley States. In the interior the frost was not severe enough to do more than local damage to tender vegetation, while in the Northwest most of the staple crops had matured. Rains from the Lake region southwestward were beneficial in conditioning the soil for plowing and fall seeding and for pastures and unmatured crops, but from the Ohio Valley and Middle Atlantic States southward moisture was quite generally needed and very little was received during the latter part of the month. There was also need of more rain in parts of the Southwest, but in the Pacific Northwest showers and warmth made a favorable period.

Small grains.—During the first part of the month conditions were generally favorable in the Northwestern States, particularly in the Spring Wheat Belt, and harvesting and threshing made good progress. Harvest was practically completed in North Dakota and threshing was well along; there was some slight interruption to this work in northern Rocky Mountain sections, but in general good advance was made. Rain was needed in interior sections for fall plowing, especially in the Ohio Valley States, but much wheat ground had been prepared. In the trans-Mississippi area the soil was mostly in good condition, but in the Lake region rain was needed to soften it. Rains during the second decade caused some delay to threshing and harvesting, principally in western Montana, Idaho, and the eastern portions of Washington and Oregon. East of the Rocky Mountains threshing made good progress and preparations for fall seeding advanced with the soil in good condition in most sections, though additional moisture would have been helpful in parts. Threshing made good progress in the spring wheat region during the last decade and the seeding of winter wheat advanced very well, though in the western portion of the belt there was interruption by rain the latter part of the period. There was also considerable seeding in the northern portions of the eastern wheat belt, but moisture was needed for this work in most sections east of the Mississippi River.

Corn.—With the summer warmth and abundant sunshine during the first decade in most sections of the Corn Belt forcing maturity at an unusually rapid rate, the progress of the corn crop was generally good to excellent in practically all portions east of the Rocky Mountains. Progress in Iowa was fair to excellent, except on some uplands where it was too dry. In other trans-Mississippi States conditions were very favorable; corn was nearly all matured in Oklahoma and much was sufficiently advanced for seed in South Dakota.

Under continued favorable conditions during the second decade the bulk of the crop was safe from frost in Kansas by the close of the period and probably three-fourths was safe in Nebraska and South Dakota. Much corn in Iowa needed a continuation of favorable conditions for maturity, but most of it was safe in Missouri, and the crop was made farther south. The cool wave the beginning of the last decade caused corn to make slow progress toward maturity, but there was no widespread damage from this cause. Harm was somewhat greater in Central-Northern States outside the main Corn Belt, principally in Wisconsin and Minnesota. Except in Iowa, the bulk of corn was safe from frost at the close of the month in most main producing trans-Mississippi areas. East of the Mississippi River the crop was in much less favorable condition as to maturity, especially in Illinois and Indiana, where a large amount was still green.

Cotton.—During the first decade better weather prevailed in the Cotton Belt, with higher temperatures in the northern and more eastern States and showers in parts of Texas. The crop showed some improvement in the Carolinas and Virginia, and in Georgia progress was mostly good, but condition continued to vary greatly, with weevil still active and no top crop indicated in the southern portions. In Alabama progress ranged from deterioration in some sections to fair in others; rains were unfavorable in Louisiana, but in Arkansas progress was fairly good in most portions. In Oklahoma advance ranged from very poor to poor in the south-central and eastern portions, where weevil continued active and destructive, but good to very good in the west. In Texas rains reduced premature opening, and progress continued good in the northwest and parts of the west; deterioration in the northeast was checked by showers, but elsewhere it continued and prospect for a top crop was poor.

During the second decade a continuation of warm, dry weather was favorable from the aspect of weevil, but considerable shedding of young bolls was reported from some drier sections of the east. Because of the dryness and warmth, shedding was reported from the Piedmont section of the Carolinas. Early bolls were about all open in Tennessee, while in Alabama and Mississippi rapid opening was noted. Late cotton on previously overflowed land in Louisiana was rather uncertain, but in Arkansas good advance was reported. Weevil were still active in Oklahoma, and there was no general change in the situation in Texas.

During the last decade conditions remained practically unchanged in the eastern belt, with bolls opening rapidly and picking and ginning progressing well. In Louisiana weevil and worms continued to take the top crop, but in Arkansas progress was mostly very good. In Texas cotton opened rapidly, with picking and ginning progressing well, but general progress of the crop was poor. In Oklahoma the cool, wet weather was unfavorable and cotton deteriorated, or made only poor advance, with continued weevil and worm activity.

Ranges, pastures, and livestock.—Pastures needed rain during the first decade in the eastern Ohio Valley, much of the Lake region, sections of the South, and

locally in the Great Basin. Pastures and meadows were greatly benefited by rains in the Lake region during the second decade, but moisture in the South was generally insufficient and the continued dry weather was detrimental. Beneficial showers occurred in portions; of the Great Basin and Arizona, and the prolonged wet spell was broken in the Pacific Northwest. Livestock continued in mostly good to excellent condition throughout the month.

Miscellaneous crops.—At the close of the month potato digging was progressing in most portions, but warmer weather was needed in the Lake region. Truck needed moisture rather badly in the Southeast at the close; frost caused some slight injury to truck in Wisconsin. Sugar cane continued to make good progress, and sugar beets were being dug in parts of the west, with good sugar content reported. Apple picking had started in the Pacific Northwest at the close.

WEATHER OF THE ATLANTIC AND PACIFIC OCEANS

NORTH ATLANTIC OCEAN

By F. A. YOUNG

With the exception of the rather unusual disturbance of a tropical origin in the last decade of the month which will be referred to later, the weather conditions over the ocean during the month of September presented few abnormal characteristics. East of the 45th meridian gales were not reported on more than two days in any 5-degree square, while between the 35th and 45th parallels and the 45th and 60th meridians they occurred on from one to four days.

The number of days with fog was apparently somewhat below the normal over the Grand Banks, about normal off the American and European coasts, and considerably above over the middle section of the steamer lanes.

TABLE 1.—*Averages, departures, and extremes of atmospheric pressure at sea level, 8 a. m. (75th meridian), North Atlantic Ocean, September, 1927*

Stations	Average pressure	Departure [1]	Highest	Date	Lowest	Date
	Inches	*Inch*	*Inches*		*Inches*	
Belle Isle, Newfoundland	29.75	−0.15	30.30	1st	29.18	17th.
Halifax	29.98	−0.03	30.42	28th	29.40	12th.
Nantucket	30.02	−0.02	30.40	28th	29.60	11th.
Hatteras	30.03	0.00	30.26	25th	29.72	11th.
Key West	29.93	−0.04	30.04	5th	29.86	11th.
New Orleans	29.99	0.00	30.16	23d	29.84	18th.
Cape Gracias-a-Dios, Honduras [2]	29.83	−0.05	29.88	5th [3]	29.78	29th.[3]
Turks Island	29.97	0.00	30.04	3d	29.88	29th.
Bermuda	30.02	−0.03	30.24	30th	29.76	12th.
Horta, Azores	30.22	+0.06	30.42	26th	29.70	21st.
Lerwick, Shetland Islands	29.63	−0.21	30.26	3d	28.92	24th.
Valencia, Ireland	29.84	−0.15	30.23	12th	29.30	24th.
London	29.92	−0.08	30.24	2d	29.15	24th.

[1] From normals shown on H. O. Pilot Chart, based on observations at Greenwich mean noon, or 7 a. m., 75th meridian.
[2] Cape Gracias-a-Dios, on the extreme eastern coast of Honduras, was substituted for Swan Island, the latter station having been discontinued on Sept. 1, 1927.
[3] And on other dates.

During the first two days of the month moderate conditions prevailed generally, although on the 2d a depression was over the eastern section of the steamer lanes that afterwards developed into a fairly well defined disturbance which on the 3d was central near 55° N., 30° W., with moderate to whole gales in the southerly quadrants.

On the 5th Belle Isle was near the center of a LOW that afterwards developed into a severe disturbance, although of limited extent and short duration. On the 6th this depression had moved but little and deepened slightly, but on that day it was attended by moderate winds only.

On the 7th a comparatively well developed LOW was over the middle section of the steamer lanes, with moderate southwest gales between the 40th and 45th parallels and the 35th and 40th meridians.

A report was received from the British S. S. *Matador* indicating that on the evening of the 7th and the morning of the 8th a severe local disturbance of short duration occurred in southern waters. The *Matador* received a radiogram from the British S. S. *Socrates* stating that on the morning of the 8th, in 21° 40′ N., 51° 00′ W., the barometer read 29.73, falling, wind SE., force 10. Storm center moving toward NW.

On the 9th Belle Isle was again near the center of a disturbance that moved but little during the next 24 hours, decreasing in intensity.

On the 12th the Maritime Provinces were covered by a depression, while a secondary LOW was central a short distance east of the Bermudas, and vessels between the two centers encountered winds of from force 4 to 9.

From the 13th to 19th the weather over the ocean was, as a rule, favorable, although during this period reports were received from a few vessels that had encountered gales, and on the 15th northerly winds of force 7 were reported by land stations in southern England.

On the 20th and 21st a severe but limited disturbance was in the vicinity of the Azores, and on the latter date westerly winds of force 10 prevailed in the southerly quadrants.

On the 23d a "double LOW" was in European waters; the southern center was near Portland Bill and the northern near Lerwick, and winds of hurricane force were reported by vessels in the English Channel. By the 24th these two LOWS had evidently combined, the center now being over the North Sea, while northerly gales still prevailed off the coast of northern Europe and between the 45th and 55th parallels and the 20th and 30th meridians.

The existence of the tropical disturbance of this period, which has already been referred to, was first definitely established on the 24th. The center on that date was in approximately latitude 25° N., longitude 54° W., with a direction of movement almost due northwestward. This movement, had it been maintained, would have carried the center close to Bermuda. However, the storm began to recurve on the 25th and the westernmost point of its path was the 61st meridian, reached about midday of the 26th. Completing the recurve by the morning of the 27th, the storm moved in a northeasterly direction, and on the morning of the 30th the center appeared to be at latitude 45° N., longitude 49° W. Its subsequent history has not yet been determined.

The general period of these two disturbances, extending from the 24th to the 29th, is covered by Charts VIII to XIII, which give an idea of their extent and intensity from day to day.

NOTE.—American S. S. *Bogota,* Capt. H. U. Davis, from Kingston to New York:

On September 15, in 25° 25′ N., 74° 34′ W., observed two large and one small waterspouts within one-half to 3 miles of the ship, followed by thunder and heavy rain showers. No change in barometer. Wind veered from NE. all the way round the compass one-half hour from 4.30 to 5 p. m.